Claims

[c1] (Currently amended)

A system for determining the geographical location of roaming objects, <u>over a wide area,</u> comprising:

a) a communication network, consisting of at least a plurality of communication devices, each of which having wireless and/or wireline communication capability with other communication devices over said communication network, wherein at least one of said communication devices is <u>a personal</u> mobile <u>device,</u> and <u>capable</u> of establishing wireless communication with other wireless devices in the vicinity of said communication device <u>and relaying data from said wireless devices to said communication network,</u> said communication network being capable of obtaining the geographical location of said communication devices and transmitting data representing said geographical location to a destination, over said communication network;

b) a <u>low power</u> wireless tag, attached to each of said roaming objects, being a wireless device, in which a unique data is stored, said tag being capable of communicating with one or more communication devices and transmitting said unique data to said destination through said communication device(s) and over said communication network; and

c) a control center being, or linked to, said destination, for receiving said unique data from said tag and for using said unique data and the location of the communication device, through which said unique data is transmitted, for determining/displaying or forwarding the geographical location of said tag.

[c2] (Original)

A system according to claim 1, in which each communication device comprises:

a) a short-range wireless transceiver for communicating with one or more wireless tag(s) being in the vicinity of said communication device;

b) a memory for storing multiple unique data transmissions from the same tag, and/or unique data transmissions from different tags;

c) circuitry for transmitting said data to the destination, over the communication network; and

d) a control circuitry for controlling the communication between said communication device and tags and the transmission of said unique data over said communication network.

[c3] (Original)

A system according to claim 1, in which each communication device further comprises:

a) location determining circuitry for determining the geographical location of said communication device; and

b) circuitry for transmitting data representing said location to the destination.

[c4] (Original)

A system according to claim 1, in which the tag comprises:

a) a short-range wireless transceiver for communicating with one or more communication devices being in the vicinity of said tag;

b) a memory for storing the unique data; and

c) a control circuitry for controlling the communication between said tag and said communication device.

[c5]   (Original)
A system according to claim 1, wherein the communication network is a cellular or mobile or wireless network.

[c6]   (Original)
A system according to claim 1, wherein the communication devices are selected from the group: mobile telephones; cellular telephones; wireless telephones; portable computers; PDAs; WAN-LAN gateways or APs (Access Points); WAN-PAN gateways or APs; LAN-PAN gateways or APs.

[c7]   (Currently amended)
A system according to claim 1, wherein the communication between the tag and the communication device complies with a communication standards selected from the group: Bluetooth; ~~IEEE 802.11;~~ ~~WiFi; Wi~~Wi-Fi; HIPERLAN; Wi-Max; HomeRF.

[c8]   (Original)
A system according to claim 1, wherein the data representing the location of the communication device is determined either by the communication network or by the communication device or by a combination thereof.

[c9]   (Original)
A system according to claims 1 or 8, wherein the data representing the location of the communication device or the data provided by the tag are affiliated into the control signals that are transmitted from said communication device over the communication network.

[c10]   (Currently amended)
A system according to ~~any one of claims 1,~~claim 3 ~~or~~ 9, wherein the data representing the location of the communication device is determined by utilizing Global Positioning System (GPS) technology.

[c11]   (Original)
A system according to claim 1, wherein the communication between tags and communication devices is established using unlicensed frequency band.

[c12]   (Original)
A system according to claim 1, wherein the unique data is related to the tag's ID and/or to the time at which said unique data is transmitted.

[c13]   (Original)
A system according to claim 12, wherein the time at which the unique data is transmitted to communication devices, is recorded by the communication devices.

[c14]   (Original)
A system according to claim 1, wherein whenever the communication device receives a new data signal and its corresponding memory is full, the oldest data stored in said memory is overwritten by said new data.

[c15]   (Currently amended)
A system according to claim 1, wherein the control center interrogates the communication devices for the presence of tags in their vicinity, according to at least one of the following parameters: the ~~tag~~tag's ID; the time; the geographical region; the ID of communication devices.

[c16]   (Currently amended)
A system according to claim 1, wherein the utilization of communication device for locating tags does not require the ~~subscriber~~subscriber's permission or wherein a subscriber that owns or operates a communication device permits utilizing said communication device for locating tags.

[c17]   (Original)
A system according to claim 1, wherein the data representation of the location of tag(s) is converted from geographic coordinates to a corresponding physical address.

[c18] (Original)
A system according to claim 1, wherein the initiation to start a tag location may come from a tag and/or a communication device and/or a control center, and/or an input to a tag and/or an input to a communication device and/or an input to a control center.

[c19] (Original)
A system according to claim 1, wherein the communication between a tag and a communication device is enabled during specific periods of time and/or when a communication device and/or a tag are part of a predetermined sub group.

[c20] (Original)
A system according to claim 1, wherein the location accuracy of the tag is refined by obtaining distance and/or direction information related to the relative position between the tag and the communication device.

[c21] (Original)
A system according to claim 1, wherein the roaming object is selected from the following group: persons; animals; vehicles; goods; mailed/delivered items; weapons; ammunition.

[c22] (Original)
A system according to claim 1, wherein the location accuracy of the tag is refined by extrapolation, when the transmission of the unique data from the tag to the communication device and the determination of the location of the communication device are performed at different times.

[c23] (Original)
A system according to claim 1, wherein the control center is a communication device.

[c24] (Original)
A system according to claim 1, wherein tags and/or communication devices relay/retransmit data that arrives from other tags and/or communication devices.

[c25] (Currently amended)
A low power wireless tag, attached to a roaming object, for determining the geographical location of said roaming object, over a wide area, said tag being capable of communicating with one or more communication devices being part of a communication network, said communication device being capable of relaying data from said tag to said communication network, said communication network being capable of obtaining the geographical location of said communication devices and transmitting data representing said geographical location to a destination, over said communication network, and transmitting, through communication device(s) and over said communication network, a unique data to a destination, at which the geographical location of said tag is determined/displayed or forwarded, using said unique data and the location of the communication device, through which said unique data is transmitted, wherein at least one of said communication devices is a personal mobile device.

[c26] (Currently amended)
A communication device being part of a communication network that comprises other communication devices, said communication network being capable of obtaining the geographical location of said communication devices and transmitting data representing said geographical location to a destination, over said communication network, said communication devices being capable of communicating with each other and with said communication device, for determining the geographical location of a roaming object, over a wide area, by determining the geographical location of a low power wireless tag, attached to said roaming object, said communication device being capable of communicating with said tag and of relaying data from said tag to said communication network, and transmitting, over said communication network, a unique data that is received from said tag to a destination, at which the geographical location of said tag is determined/displayed or forwarded, using said unique data and the location of said communication device, wherein at least one of said, or said other communication devices is a personal mobile device.

[c27]   (Currently amended)
A method for determining the geographical location of roaming objects, over a wide area, comprising:

a) Providing a communication network, consisting of at least a plurality of communication devices, each of which having wireless and/or wireline communication capability with other communication devices over said communication network, wherein at least one of said communication devices is a personal mobile device, and of establishing wireless communication with other wireless devices in the vicinity of said communication device, and relaying data from said wireless devices to said communication network, said communication network being capable of obtaining the geographical location of said communication devices and transmitting data representing said geographical location to a destination, over said communication network;

b) attaching a low power wireless tag being a wireless device in which a unique data is stored, to each of said roaming objects;

c) allowing said tag to communicate with one or more communication devices and to transmit said unique data to said destination through said communication device(s) and over said communication network;

d) receiving said unique data from said tag in a control center being, or linked to, said destination; and

e) determining/displaying or forwarding the geographical location of said tag using said unique data and the location of the communication device, through which said unique data is transmitted.

[c28]   (Canceled)

[c29]   (Canceled)

[c30]   (Canceled)

[c31]   (Canceled)